## DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

## LAKE TROPHIC DATA

## MORPHOMETRIC:

Lake: KOLELEMOOK LAKE	Lake Area (ha):	40.02
Town: SPRINGFIELD	Maximum depth (m):	6.7
County: Sullivan	Mean depth (m):	4.1
River Basin: Connecticut	Volume (m³):	1623000
Latitude: 43°29'21" N	Relative depth:	0.9
Longitude: 72°02'31" W	Shore configuration:	1.29
Elevation (ft): 1387	Areal water load (m/yr	): 3.64
Shore length (m): 2900	Flushing rate $(yr^{-1})$ :	0.90
Watershed area (ha): 246.9	P retention coeff.:	0.71
<pre>% watershed ponded: 0.0</pre>	Lake type:	natural

BIOLOGICAL:	14 January 1997	25 June 1996
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DOM. PHYTOPLANKTON (% TOTAL) #	ASTERIONELLA 70%	DINOBRYON 40%
#	2	MELOSIRA 30%
#	3	ANABAENA 15%
PHYTOPLANKTON ABUNDANCE (units/mL		
CHLOROPHYLL-A (µg/L)		2.20
DOM. ZOOPLANKTON (% TOTAL) #	SPARSE - NO DOMINANT	KERATELLA 45%
#.	2	VORTICELLA 18%
#	3	NAUPLIUS LARVA 12%
ROTIFERS/LITER	<1	89
MICROCRUSTACEA/LITER	11	38
ZOOPLANKTON ABUNDANCE (#/L)	11	156
VASCULAR PLANT ABUNDANCE		Sparse
SECCHI DISK TRANSPARENCY (m)		3.8
BOTTOM DISSOLVED OXYGEN (mg/L)	10.1	5.6
BACTERIA (E. coli, #/100 ml) #		< 10
#	2	
#	3	

# SUMMER THERMAL STRATIFICATION:

## stratified

Depth of thermocline (m): 3.6
Hypolimnion volume (m³): 238100
Anoxic volume (m³): None

CHEMICAL:			KOLELEMOO SPRINGFIE		
	14 January 1997 25 J		June 1996		
DEPTH (m)	2.0	4.0	2.0	4.0	5.5
pH (units)	5.8	5.9	6.6	6.5	6.2
A.N.C. (Alkalinity)	4.9	5.3	3.8	3.8	3.8
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.24	0.37			
TOTAL PHOSPHORUS	0.014	0.011	0.012	0.012	0.013
CONDUCTIVITY (µmhos/cm)	65.2	70.3	73.3	72.9	73.4
APPARENT COLOR (cpu)	6	13	5	7	9
MAGNESIUM			0.56		
CALCIUM			3.1		
SODIUM			9.7		
POTASSIUM			0.48		
CHLORIDE	11	12	14		14
SULFATE	6	6	5		6
TN : TP	17	34			
CALCITE SATURATION INDEX			3.6		

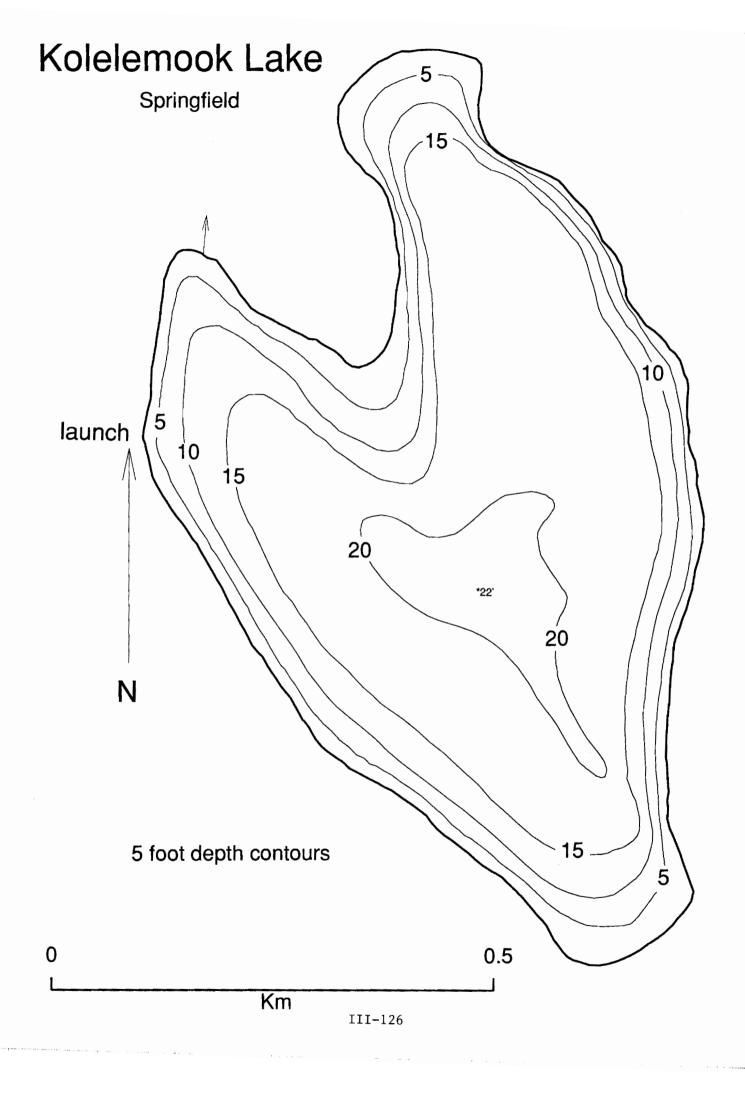
All results in mg/L unless indicated otherwise

## TROPHIC CLASSIFICATION: 1996

D.O.	s.D.	PLANT	CHL	TOTAL	CLASS
0	2	0	0	2	Oligo.

# **COMMENTS:**

- 1. Kolelemook Lake was previously surveyed and classified in 1980. There was no change in the trophic classification although water clarity was reduced by 5 feet in 1996.
- 2. This lake participates in VLAP. Monthly summer data since 1987 suggest relatively stable to slightly improving water quality.
- 3. Slightly elevated sodium, chloride and conductivity values suggest some road-salt runoff into the pond.
- 4. Good boat launch was located at the northwestern end of the pond adjacent to the town beach. Parking was available.



## FIELD DATA SHEET

LAKE: KOLELEMOOK LAKE

TOWN: SPRINGFIELD

DATE: 06/25/96

WEATHER: CLEAR, SUNNY

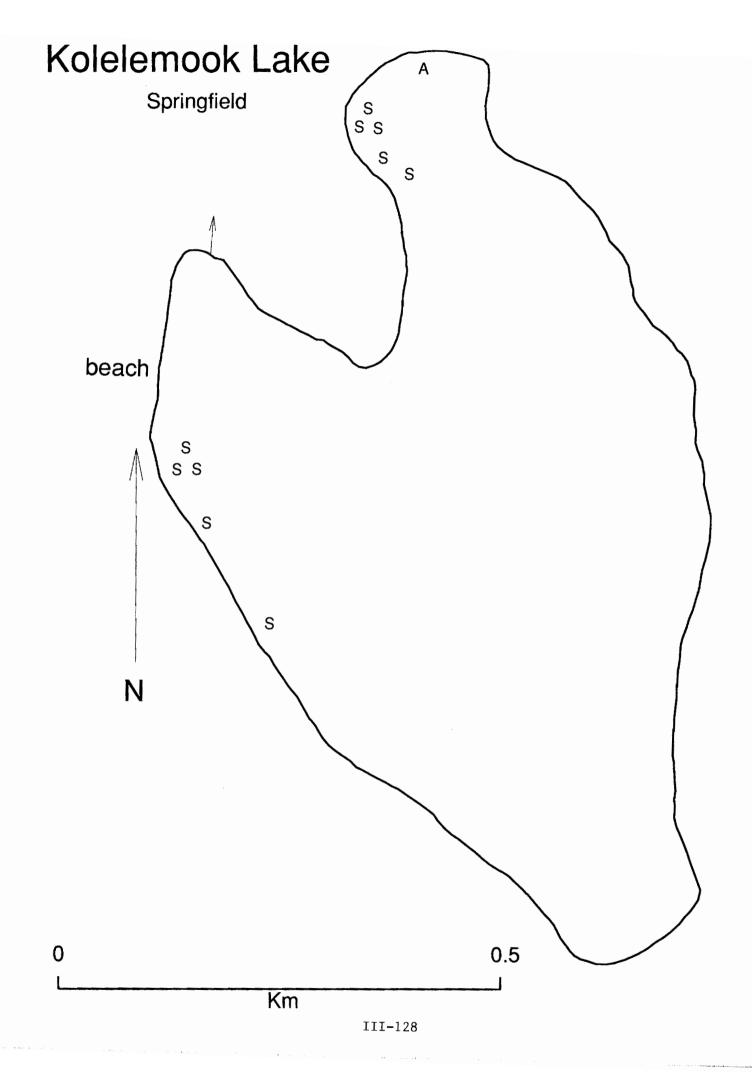
DAID: 00/25/50 WEATHER: CHEAR, SOUNT				
DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION	
0.1	20.0	9.6	104 %	
1.0	20.0	9.6	104 %	
2.0	20.0	9.4	103 %	
3.0	20.0	9.4	103 %	
4.0	15.2	7.6	74 %	
5.0	14.1	7.8	74 %	
6.0	14.0	5.6	54 %	

COMMENTS:

SECCHI DISK (m): 3.8
BOTTOM DEPTH (m): 6.1

TIME: 1136

\*Dissolved oxygen values are in mg/L



# AQUATIC PLANT SURVEY LAKE: KOLELEMOOK LAKE TOWN: SPRINGFIELD DATE: 06/25/96 PLANT NAME Key ABUNDANCE **GENERIC** COMMON Α Sagittaria Arrowhead Sparse Sparganium Bur reed Sparse OVERALL ABUNDANCE: Sparse

## **GENERAL OBSERVATIONS:**

- 1. Water was choppy during the plant survey, making viewing the lake sediment difficult. Some bottom growth was present; some of it may have been the vegetative rosette of pipewort.
- 2. Numerous turtles were observed sunbathing.